

New Seed Varieties

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Thanksgiving Point

- **Where seeds come from is a story that is old and new; simple but very complex.**

- **Where seeds come from, who helps combine and selects their genetics and how they eventually get to the package that you plant from is a fascinating international story.**

- **Daunting, careful, painstaking work creates new vegetable and flowers each year.**

- **Seeds have been around since plants have been on the earth.**

These tiny embryos have the plants in miniature and the stored energy to let them grow. In the genetics of the seed is the mystery.

Like all living organisms, the code determines what will grow.

For some varieties the process is simple. They are open pollinated, meaning they are genetically true to their parentage.

Others are crossed to create hybrid varieties that will differ from either parent.

Some gardeners refuse to grow hybrids because they claim the varieties are created artificially.

Remember, hybrids occur in nature and increase the genetic variety of many organisms.

The strict definition of a hybrid is the cross between different species or genera.

More loosely defined, a hybrid is a cross between different subspecies or cultivars.

**The closer the parental relationship,
the more successful the hybrid.**

**Parents differing only in
pigmentation usually produce a
normal hybrid.**

Some crosses produce sterile hybrids; just as the mule is the sterile offspring of a mare and a male donkey.

**Offspring of different plant species
are usually sterile, but can be
reproduced by cuttings or grafting.**

**Chemical, temperature or
irradiation treatment makes some
sterile hybrid plants fertile.**

**So why do many gardeners look for
new hybrids for their gardens?**

Successful hybrids

- Show hybrid vigor**
- Are larger and faster growing**
- Show superior colors**
- Have desirable ornamental characteristics**

They may also be more resistant to insects, diseases or other problems.

Most corn, tomatoes, bananas, and sugar beets today are hybrids that bear much larger fruit than their parent stock.



Farmers improved crops through the ages by saving seeds from the best plants to sow the following year.

Crop improvement was slow but sure. American horticulturist Luther Burbank selected and bred new varieties and many others continue this work.

Breeding new varieties is now even more sophisticated

Goldsmith Seed operates a multinational organization that develops and produces flower seeds for sale around the world.

Their display and research facilities are in Gilroy, California but they have farms and other facilities in Michigan, Guatemala, Holland and Kenya.

The development of a new flower variety starts inside their greenhouses and continues through many stages until it finally reaches your landscape.

Jeannine Bogard, a Goldsmith Seed manager, shares the seed story of their display gardens and field trials.

Goldsmith seed is a breeder and primary producer of seeds. We do not sell them directly to the consumer but our varieties are some of the best known in the industry.

We grow our seed in production facilities in Central America and Africa.

The reason we have farms in so many areas is to provide a way to increase our seed very rapidly because we always have good production weather somewhere.

After we have sufficient quantity of seed, we can then sell the seed to other companies that then sell it to consumers.

We are always looking for new and different varieties.

The process is not easy and is often very time consuming.

**The fastest we have ever been able to
get a new variety introduced to the
public is five years.**

That is very unusual and as only possible because we only had to change a color and already had the existing gene pool.

New varieties usually take much longer to develop.

We plan for an average of fifteen years and plant breeders usually pass their genetic line down to successive breeders.

Keeping new developments in the pipeline is important so you can use them to introduce new characteristics into your plants.

**If you had to start over each time it
would take decades for each new
variety.**

Part of the challenge of breeding plants is trying to decide what the trends will be in the next decade or two.

Right now look for smaller, more compact plants that lend themselves to culture in containers and other planters.

Landscapes are smaller and people want them to be more colorful around their patios and other areas.

We also want to accommodate those who are trying to change their displays several times each year.

**That means we need plants that
flower early and keep flowering
until they are replaced.**

Low maintenance is also important.

One important characteristic is that the flowers will deadhead themselves.

**That means less work for the
homeowner or the commercial
landscaper and the beds look better.**

We are working on getting that characteristic into marigolds and other flowers.

**The future of the plant world is
dynamic and exciting.**

What changes will come are impossible to predict but like everything else in life, changes will come.

These changes are part of the excitement of growing a garden each year.